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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,216

06/05/2006

Walter Ruten

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04/30/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

GAWORECKI, MARK R

ART UNIT

PAPER NUMBER

2884

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,216	Applicant(s) RUTTEN ET AL.	
	Examiner MARK R. GAWORECKI	Art Unit 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-16 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/17/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 17 April 2008 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 17 April 2008 has been received. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 8-12, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeromin *et al.* (5,381,014).

With respect to claims 1, 9, and 10, Jeromin discloses an X-ray imaging detector (abstract) comprising a substrate (15, Fig. 1, four modules shown in Fig.

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4), an array of sensor elements formed on one side of the substrate (17, Fig. 4), and an integrated electronics module mounted at one edge of the substrate (41), wherein the module comprises an analog-to-digital converter and is mounted on the same side of the substrate as the array of sensor elements (column 6, lines 58-67).

With respect to claims 12 and 16, Jeromin, as applied above, further shows flexible connections (wire lines, 45) for connecting the modules to remote electronics (Fig. 4).

With respect to claims 2, 11, and 14, Jeromin shows the array of sensor elements to be positioned in columns, wherein each of the columns has a readout lead, and wherein each readout lead is connected to one amplifier of a plurality of amplifiers (Fig. 3; column 5, lines 29-35).

With respect to claim 8, Jeromin shows the substrate to comprise electronics made of crystalline silicon (column 5, lines 36-64).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 4, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeromin.

With respect to claims 3, 4, 13, and 15, Jeromin, as applied to claims 1, 10, and 14 above, teaches the use of a multiplexer downstream of the integrated module (40), but does not specifically disclose at least one multiplexer connected upstream of the integrated module. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a multiplexer would be used in order for the multiple elements shown in Fig. 4 to share a single integrated module (41) without the need for processing and ADC electronics to be provided for every individual line. The use of multiplexers in such a fashion is commonly known and conventional in the art. With respect to the upstream multiplexer being analog and the downstream multiplexer being digital, these properties would have been inherent, as an analog signal is present upstream of the module and digital downstream of the module (due to the analog-to-digital converter, as addressed in claims 1 and 10).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeromin, in view of Kobayashi *et al.* (5,914,485).

With respect to claim 7, Jeromin does not specifically disclose how the signal processing module (41) is mounted to the substrate. However, flip-chip contacting, wire-bonding, and mounting of packaged ICs on a wafer are all conventional in the art and would have been obvious to one having ordinary skill in the art at the time the invention was made. Kobayashi is cited to show a similar structure, wherein the claimed mounting methods are used (column 9, lines 19-37).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeromin, in view of Catchpole *et al.* (4,675,739).

With respect to claim 5, Jeromin does not specifically disclose the material from which signal processing module is formed. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that amorphous or crystalline silicon is commonly used in IC devices. Catchpole is cited as a similar device comprising an IC formed from amorphous silicon (column 10, lines 35-57).

Allowable Subject Matter

9. Claims 17-20 are allowed.
10. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 6 and 17-20, the prior art of record, as applied above, does not disclose or suggest an imaging detector as claimed, which includes an array of sensor elements extending along one side of the substrate to three edges of the substrate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK R. GAWORECKI whose telephone number is

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(571)272-8540. The examiner can normally be reached on Monday through Thursday, 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MG/

22 April 2008

/David P. Porta/

Supervisory Patent Examiner, Art Unit 2884